IN THE CLAIMS

CLEAN COPY OF AMENDED CLAIMS:

1. (Amended) A separating device for separating/extracting program data of one or more specified desired programs from one or more data streams formed of plural program data multiplexed per a fixed unit, comprising:

selecting means for receiving said one or more data streams and for selecting at least part of said one or more data streams; and

separating/extracting means for separating/extracting program data of said one or more specified desired programs from said at least part of said one or more data streams.

2. (Amended) The separating device according to Claim 1, further comprising:

multiplexing means for multiplexing said at least part of said one or more data streams or program data of said one or more specified desired programs to be sent out from said separating/extracting means.

3. (Amended) The separating device according to Claim 1, wherein:

said one or more data streams are formed of said plural program data packetized and multiplexed per said fixed unit; and

said separating/extracting means outputs program data of said one or more specified desired programs separated and extracted as packetized data.

4. (Amended) A method for separating/extracting program data of one or more specified desired programs from one or more data streams formed of plural program data multiplexed per a fixed unit, comprising:

receiving said one or more data streams and selecting at least part of said one or more data streams; and

separating/extracting program data of said one or more specified desired programs from said at least part of said one or more data streams.

5. (Amended) The separating/extracting method according to Claim 4, further comprising:

multiplexing said at least part of said one or more data streams or program data of said one or more specified desired programs to be sent out after said separating/extracting step.

6.   (Amended)   The   separating/extracting   method according to Claim 4, wherein:

each of said one or more data streams is formed of said plural program data packetized and multiplexed per said fixed unit; and

said separating/extracting step outputs program data of said one or more specified desired programs separated and extracted as packetized data.

7.   (Amended) A signal receiving device for receiving one or more data streams formed of program data of plural programs multiplexed per a fixed unit, said data streams being transmitted as individual data streams or as part of a transmission signal including said individual data streams, the signal receiving device comprising:

selecting means for inputting said data streams said data streams being transmitted as individual data streams or as part of a transmission signal including said individual data streams, and for selecting at least a part of said input data streams ;

separating/extracting means for separating/extracting said program data of one or more specified programs included in said selected data streams; and

decoding   means   for   decoding   said   program   data separated/extracted by said separating/extracting means.

8.   (Amended) The signal receiving device according to Claim 7, further comprising:

multiplexing means for multiplexing each of said data streams selected by said selecting means or said program data of said one or more specified programs to be sent out from said separating/extracting means.

9.   (Amended) The signal receiving device according to Claim 7, wherein:

said one or more data streams are formed of said program data packetized and multiplexed per the fixed unit; and

said separating/extracting means outputs program data of said one or more specified programs separated/extracted as packetized data.

10. (Amended) A method of receiving one or more data streams formed of program data of plural programs multiplexed per a fixed unit or a transmission signal formed of said one or more data streams, the signal receiving method comprising:

inputting said one or more data streams multiplexed per the fixed unit or said one or more data streams formed of said transmission signal, and of selecting a part or all of said one or more data streams;

separating/extracting program data of one or more specified programs included in each of said one or more data streams selected at said inputting step; and

decoding said program data separated/extracted at said separating/extracting step.

11. (Amended) The signal receiving method according to Claim 10, further comprising:

multiplexing each of said one or more data streams selected at the first step or program data of said one or more specified programs to be sent out from said separating/extracting step.

12. (Amended) The signal receiving method according to Claim 10, wherein:

said one or more data streams are formed of said program data packetized and multiplexed per the fixed unit; and

said separating/extracting step outputs program data of said one or more specified programs separated and extracted as packetized data.

Insert new claims 13-36, as follows:

13. (New) An apparatus for receiving, separating and decoding a data stream, comprising:

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a receiver operable to produce an initial data stream containing multiplexed data packets representing a plurality of data programs from at least one signal received over a communication channel;

a separating device operable to produce an intermediate data stream containing multiplexed data packets representing one or more selected ones of the data programs chosen from the initial data stream; and

a decode processor operable to decode the intermediate data stream such that the multiplexed data packets representing the selected data programs are associated with one another.

14. (New) The apparatus of claim 13, wherein the separating device includes:

a multiplexer operable to produce a multiplexed data stream including the initial data stream; and

a separator operable to extract the selected data programs from the multiplexed data stream.

15. (New) The apparatus of claim 14, wherein:

the multiplexed data packets representing the plurality of data programs each include an original packet identifier; and

the separating device includes an interchange unit operable to change the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet, and to rewrite the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to the separating device producing the intermediate data stream.

16. (New) The apparatus of claim 14, wherein the decode processor includes:

a video decode processor operable to decode a video portion of the intermediate data stream corresponding to the selected data programs and to generate resultant video data;

an audio decode processor operable to decode an audio portion of the intermediate data stream corresponding to the selected data programs and to generate resultant audio data;

a display generator operable to process the resultant video data for multi-screen displaying; and

an audio generator operable to process the resultant audio data for playing.

17. (New) The apparatus of claim 13, wherein the separating device includes:

a separator operable to extract the selected data programs from the initial data stream; and

a multiplexer operable to produce a multiplexed data stream including each of the selected data programs extracted by the separator.

18. (New) The apparatus of claim 17, wherein:

the multiplexed data packets representing the plurality of data programs each include an original packet identifier; and

the separating device includes an interchange unit operable to change the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet, and to rewrite the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to the separating device producing the intermediate data stream.

19. (New) The apparatus of claim 17, wherein the decode processor includes:

a video decode processor operable to decode a video portion of the intermediate data stream corresponding to the selected data programs and to generate resultant video data;

an audio decode processor operable to decode an audio portion of the intermediate data stream corresponding to the selected data programs and to generate resultant audio data;

a display generator operable to process the resultant video data for multi-screen displaying; and

an audio generator operable to process the resultant audio data for playing.

20. (New) An apparatus for inputting an initial data stream containing multiplexed data packets representing a plurality of data programs received over a communication channel and for producing an intermediate data stream including one or more selected data programs, the apparatus comprising:

a multiplexer operable to produce a multiplexed data stream including the initial data stream and the one or more selected data programs; and

a separator operable to extract the selected data programs from the multiplexed data stream.

21. (New) The apparatus of claim 20, wherein the multiplexed data packets each include an original packet identifier, the apparatus further including:

an interchange unit operable to change the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet, and to rewrite the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to the separating device producing the intermediate data stream.

22. (New) The apparatus of claim 21, wherein the interchange unit includes:

a first interchange unit operable to change the original packet identifier of the first multiplexed data packet to the unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of the second multiplexed data packet; and

a second interchange unit operable to rewrite the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet

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prior to the separating device producing the intermediate data stream.

23. (New) An apparatus for inputting an initial data stream containing multiplexed data packets representing a plurality of data programs received over a communication channel and for producing an intermediate data stream including one or more selected ones of the data programs, the apparatus comprising:

a separator operable to extract each of the selected data programs from the initial data stream; and

a multiplexer operable to produce a multiplexed data stream including the selected data programs extracted by the separator.

24. (New) The apparatus of claim 23, wherein the multiplexed data packets each include an original packet identifier, the apparatus further comprising:

an interchange unit operable to change the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet, and to rewrite the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to the separating device producing the intermediate data stream.

25. (New) The apparatus of claim 24, wherein the interchange unit includes:

a first interchange unit operable to change the original packet identifier of the first multiplexed data packet to the unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of the second multiplexed data packet; and

a second interchange unit operable to rewrite the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to the separating device producing the intermediate data stream.

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26. (New)   A method for decoding packet data, comprising:

producing at least one initial data stream containing multiplexed data packets, the multiplexed data packets representing a plurality of data programs from at least one signal received over at least one communication channel;

producing at least one intermediate data stream containing selected multiplexed data packets representing one or more selected ones of the data programs chosen from the at least one initial data stream; and

decoding the at least one intermediate data stream such that the selected multiplexed data packets representing each of the one or more selected data programs are associated with one another.

27. (New)   The method of claim 26, wherein the step of producing the at least one intermediate data stream includes:

multiplexing each of the initial data streams onto a multiplexed data stream; and

separating each of the selected data programs from the multiplexed data stream.

28. (New)   The method of claim 27, wherein the multiplexed data packets representing the plurality of data programs each include an original packet identifier, and the step of producing the at least one intermediate data stream includes:

changing the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet; and

rewriting the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to producing the at least one intermediate data stream.

29. (New)   The method of claim 27, wherein the step of decoding the at least one intermediate data stream includes:

decoding a video portion of the at least one intermediate data stream corresponding to the one or more selected data programs; and

decoding an audio portion of the at least one intermediate data stream corresponding to the one or more selected data programs.

30. (New) The method of claim 26, wherein the step of producing the at least one intermediate data stream includes:

separating each of the selected data programs from the at least one initial data stream; and

multiplexing each of the selected data programs onto a multiplexed data stream.

31. (New) The method of claim 30, wherein the multiplexed data packets representing the plurality of data programs each include an original packet identifier, and the step of producing the at least one intermediate data stream further includes:

changing the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet; and

rewriting the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to producing the at least one intermediate data stream.

32. (New) The method of claim 30, wherein the step of decoding the at least one intermediate data stream includes:

decoding a video portion of the at least one intermediate data stream corresponding to the one or more selected data programs; and

decoding an audio portion of the at least one intermediate data stream corresponding to the one or more selected data programs.

33. (New) A method of producing at least one intermediate data stream from at least one initial data stream

containing multiplexed data packets representing a plurality of data programs received over at least one communication channel, wherein the intermediate data stream includes one or more selected ones of the data programs, the method comprising:

multiplexing the at least one initial data stream onto a multiplexed data stream; and

separating each of the selected data programs from the multiplexed data stream.

34. (New) The method of claim 33, wherein the multiplexed data packets representing the plurality of data programs each include an original packet identifier, the method further comprising:

changing the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet; and

rewriting the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to producing the at least one intermediate data stream.

35. (New) A method of producing at least one intermediate data stream from at least one initial data stream containing multiplexed data packets representing a plurality of data programs received over at least one communication channel, wherein the intermediate data stream includes one or more selected ones of the data programs, the method comprising:

separating each of the selected data programs from the at least one initial data stream; and

multiplexing each of the selected data programs onto a multiplexed data stream.

36. (New) The method of claim 35, wherein the multiplexed data packets representing the plurality of data programs each include an original packet identifier, the method further comprising:

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changing the original packet identifier of a first multiplexed data packet to a unique packet identifier when the original packet identifier of the first multiplexed data packet is identical to the original packet identifier of a second multiplexed data packet; and

rewriting the unique packet identifier of the first multiplexed data packet back to the original packet identifier of the first multiplexed data packet prior to producing the at least one intermediate data stream.